

VIRGINIA DEPARTMENT OF TRANSPORTATION

## STRUCTURE AND BRIDGE DIVISION

### INSTRUCTIONAL AND INFORMATIONAL MEMORANDUM

<b>GENERAL SUBJECT:</b> Structural Steel	<b>NUMBER:</b> S&B-67
<b>SPECIFIC SUBJECT:</b> Protective Coatings	<b>DATE:</b> July, 2005
<b>DIRECTED TO:</b> District Structure and Bridge Engineers Residency Administrators Structural Engineer Supervisors	<b>SUPERCEDES:</b> None
<b>SIGNATURE:</b>	

The following recommendations apply to bridges that have structural steel in the main load carrying members. An evaluation of the painting costs versus superstructure replacement costs is to be part of the decision for total removal and repainting.

#### Timber Floored Bridges

The use of steel beams with timber plank flooring is discouraged on routes that receive deicing chemicals in significant amounts. Unpainted weathering steel shall not be used in bridges with timber plank flooring.

The structural steel in existing bridges with timber plank flooring should not be repainted unless the flooring is removed and/or replaced. The top of the top flange should be painted with two coats of the primer, two coats of the intermediate coat, if applicable, and two coats of the finish coat prior to the flooring being placed and secured to the beams. As an alternate to painting, a galvanic or metalized coating may be applied to the existing steel beams.

The steel beams in new bridges with timber plank flooring shall be galvanized or metalized.

#### Concrete Deck Bridges

Leaking deck joints are to be resealed prior to spot painting, top coating or total repainting.

The structural steel on existing bridges should be zone painted (spot painted) as necessary to prevent section loss. Application of a complete top coat of paint after spot painting is not recommended unless it is necessary for aesthetics.

When 15% of the total surface area of the existing paint has failed, a total removal of the existing coating and completely repainting the structural steel should be considered. When 40% of the total surface area of the existing paint has failed, total removal of the paint and complete repainting is the only option.

CC: Chief Engineer  
Chief of Systems Operations  
Director of Virginia Transportation Research Council  
Division Administrators under the Chief Engineer  
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District Administrators  
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